Operation and Service Manual

for HERMetic Sampler A.4

Note: before using the instrument please read this book.

MED-D DNV Certified Company

Certified System ISO 9001 QMI-SAI Global

This document is subject to changes without notice.

1. Table of contents

2. Recommendation for safe use

1. This Operation and Service Manual is a guide in order to help the user to operate the instrument to our best knowledge.

2. Nevertheless the maker disclaims all responsibility and liability for damage resulting from the use of the equipment regardless of the cause of the damage.

3. **Attention is drawn to the possible hazard due to electrostatic charges which may be present in the tank.** This may happen in particular with static accumulator liquids, i.e. liquids which have low conductivity of 50 picoSiemens/metre (pS/m) or less.

4. **It is very important that the instrument is grounded to the tank before the probe is introduced into the tank and remains grounded until after complete withdrawal from the tank.**

   4.1. If the instrument is installed with the quick connect coupler, grounding is effected through the quick connect coupler and the mating nipple of the valve provided that these parts are kept clean and free from corrosion in order to guarantee electrical conductivity. If a grease is used for this purpose, it must be one which contains graphite.

   4.2. If the instrument is not connected to the mating deck valve, the instrument has to be also earthed by means of the grounding cable and clamp.

5. **It is anticipated that the user will have specific operating methods laid down to ensure safety when using this type of apparatus. In this case the user's instructions shall be strictly observed.**

6. **In the absence of such instructions the following should be noted:**

   6.1. If a metal sounding pipe is fitted beneath the deck valve or tank is inerted, then ullaging, etc. is permissible at any time with no restriction.
   6.2. If there is no sounding tube or tank is not inerted, the following precautions shall be taken:

      6.2.1. If the cargo is not a static accumulator liquid, i.e. its conductivity is more than 50 pS/m, then ullaging is permitted provided that the instrument is properly grounded and earthed before the probe is inserted into the tank and remains earthed until the probe has been removed from the tank.

      6.2.2. If the cargo is a static accumulator liquid, i.e. its conductivity is less than 50 pS/m, then ullaging is permitted provided that:

         6.2.2.1. The instrument is properly grounded and earthed before the probe is inserted into the tank and remains earthed until the probe has been removed from the tank.
         6.2.2.2. The apparatus is not introduced into a tank until at least 30 minutes have elapsed after completion of any loading operation or stopping the injection of inert gas.

   6.3. For further guidance refer to International Safety Guide for Oil Tankers and Terminals (ISGOTT), ISBN 1-85609-291-7, Fifth Edition 2006, or consult the appropriate Legislative Authority for the installation.

7. **This product and his use is / may be related to international, national, local or company regulations or standards. It is the customer / user responsibility to ensure that the way to use the device complies with such applicable regulations or standards.**

8. **This device is a protable product. It must not be permanently installed on the tank and must be disconnected after use and stored in a safe and dry area.**

3. General information

3.1 Shipment note

The following parts should be included in the shipment:

- 1 instrument;
- One or more bottles as ordered;
- 1 Operation and Service Manual.

3.2 Initial inspection

Check the contents of the shipment for completeness and note whether any damage has occurred during transport. Carry out the “Initial test before installing the instrument” to verify the good functioning. If the contents are incomplete, or if there is damage, not use the device. A claim should be filled with the carrier immediately, and Enraf Tanksystem SA Sales or Service organization should be notified in order to facilitate the repair or replacement of the instrument.

3.3 Documentation discrepancies

The design of the instrument is subject to continuous development and improvement. Consequently, the instrument may incorporate minor changes in detail from the information contained in the manual.

3.4 Warranty

12 months after installation but max. 18 months after delivery ex works.

The Vendor undertakes to remedy any defect resulting from faulty design materials or workmanship. The Vendor's obligation is limited to the repair or replacement of such defective parts by his own plant or one of his authorized service stations. The Purchaser shall bear the cost and risk of transportation of defective parts and repaired parts supplied in replacement of such defective parts.

When returned to Enraf Tanksystem SA or any of its agreed Service Stations equipment must be contamination-free. If it is determined that the Purchasers equipment is contaminated, it will be returned to the Purchaser at the Purchasers expense. Contaminated equipment will not be repaired, replaced, or covered under any warranty until such time that the said equipment is decontaminated by the Purchaser.

The Purchaser shall notify by fax, telex or in writing of any defect immediately upon discovery, specifying the nature of the defect and/or the extend of the damage caused thereby.

Where no other conditions have been negotiated between the Vendor and the Purchaser "General Conditions 188" of United Nations shall apply.

This equipment has been certified as non-electrical equipment for potentially explosive atmospheres for only those classes or categories of hazardous areas stated on the instrument label, bearing the mark of the applicable approval authority. No other usage is authorized.

Unauthorized repair or component replacement by non original spare parts by the Purchaser will void this guarantee and may impair the good functioning of the instrument.

In no event shall Enraf Tanksystem SA be liable for indirect, incidental or consequential loss or damage or failure of any kind connected with the use if its products or failure of its products to function or operate properly.

Enraf Tanksystem SA do not assume the indemnification for any accident or damage caused by the operation of its product and the warranty is limited to the replacement of parts or complete goods.

3.5 Certification

Enraf Tanksystem SA is an ISO 9001 certified company by QMI and MED-D by Det Norske Veritas Certification GmbH.

3.6 Spare parts

Substitution of components may impact safety. Use only original spare parts.

When ordering spares identify the spare part by TS number and description. Refer to section “Drawings”.

Some spares might be repairable; in this case send part to any authorized service center or to the factory.

In case of urgency replacement units can be available while stocks last.

3.7 Service and Repair

The customer should take care of the freight and customs clearance charges. If units are sent on "freight collect» the charges will be invoiced to the customer.

When returning units or parts for repair to the factory please fill out a service request form (see next page).

Traceability information is engraved on a plate fixed to the sampler. The serial number of the unit is as follows:
S4 followed by a 4 digits number.

When returned to Enraf Tanksystem SA equipment must be contamination-free. If it is determined that the customers equipment is contaminated, it will be returned to the customer at the customers expense. Contaminated equipment will not be repaired until such time that the customer decontaminates the said equipment.

Service Request

Customer's address: .....
.....
.....
.....
.....

Telephone: .....

Telex: .....

Fax: .....

Type of unit or part: .....
.....

Serial number: .....

Short description of defective unit or part: .....
.....
.....
.....

Do you want a quotation before repair is started:.....yes / no.....

Repaired unit has to be returned to the following address:
.....
.....
.....
.....
.....

4. Worldwide Service Stations network

The updated list can be found on our website www.tanksystem.com

COUNTRY	ADDRESS	TELEPHONE/FAX/E-MAIL
SWITZERLAND	ENRAF TANKSYSTEM SA 2, rue de l'Industrie CH-1630 BULLE	Tel : +41-26-91 91 500 Fax : +41-26-91 91 505 Tanksystem@honeywell.com
CANADA	PYLON ATLANTIC A Div. Of Pylon Electronics Inc. 31 Trider Crescent., DARTMOUTH, N.S. B3B 1V6	Tel : +1-902-4683344 Fax : +1-902-4681203 halifax_csr@pylonelectronics.com
CHINA	HUA HAI EQUIPMENT & ENGINEERING CO LTD Factory 7, Lane 1365, East Kang Qiao Road Kang Qiao Industrial Zone, Pu Dong SHANGHAI, P.C. 201315	Tel : +86-21-68183183 Fax : +86-21-68183115 huahaish@huahaiee.com
GREECE	SPANMARIN 86, Filonos Street GR-185 36 PIRAEUS	Tel : +30-210-4294498 Fax : +30-210-4294495 spanmarin@ath.forthnet.gr
JAPAN	DAIWA HANBAI CORPORATION LTD 2-10-31, Mitejima, Nishiyodogawa-ku OSAKA 555-0012	Tel : +81-6-64714701 Fax : +81-6-64729008 daiwa471@silver.ocn.ne.jp
KOREA	World Ocean CO., LTD Rm1001, Hae-deok Bldg., 1212-11 Choryang-dong Dong-Gu BUSAN	Tel : +82-51-462-2554/5 Fax : +82-51-462-0468 marine@worldocean.co.kr
MEXICO	URBAN DEL GOLFO S.A. DE C.V. Ave. Ejército Mexicano 1902 Col. Loma del Gallo 89460 CD. MADERO, TAMPS. MEXICO	Tel : +52-833-2170190 Fax : +52-833-2170190 urbansa@prodigy.net.mx
NETHERLANDS	B.V. TECHNISCH BUREAU UITTENBOGAART Brugwachter 13 NL-3034 KD ROTTERDAM	Tel : +31-10-4114614 Fax : +31-10-4141004 info@tbu.nl

The updated list can be found on our website www.tanksystem.com

COUNTRY	ADDRESS	TELEPHONE/FAX/E-MAIL
PORTUGAL	CONTROLIS Soc. Com. Equipamentos de Controlo, Lda. Rua Conceiçao Sameiro Antunes, 26E 2800-379 COVA DA PIEDADE	Tel : +351-21-2740606 Fax : +351-21-2740897 controlis@netc.pt
RUSSIA	NPP "GERDA" Vilisa Latsisa str. 17 Building 1 125480 MOSCOW	Tel : +7-495-7558845 Fax : +7-495-7558846 info@gerda.ru
SINGAPORE	HUBBELL INT'L (1976) PTE LTD 322 Thomson Road SINGAPORE 307665	Tel : +65-6-2557281 Tel : +65-6-2550464 Fax : +65-6-2532098 hubbell@mbox2.singnet.com.sg
SPAIN	E.N.I. Electronica y Neumatica Industrial, S.A. C/Jon Arrospide, 20 (Int.) 48014 BILBAO	Tel : +34-94-4746263 Fax : +34-94-4745868 eni.tecnica@eni.es
SWEDEN	INSTRUMENTKONTROLL Lars Petersson AB Varholmsgatan 1 414 74 GÖTEBORG	Tel : +46-31-240510 Tel : +46-31-240525 Fax : +46-31-243710 Info@instrumentkontroll.se
TURKEY	YEDI DENIZ Setustu, Izzetpasa Yok.1 TR 34427 Kabatas ISTANBUL	Tel : +90.212.251 64 10 / 3 lines Fax : +90.212.251 05 75 servicestation@yedideniz.net
UNITED ARAB EMIRATES	MARITRONICS TRADING L.L.C. P.O. Box 6488 Shed # 72, Jadaf Ship Docking Yard DUBAI	Tel : +971-4-3247500 Fax :+971-4-3242500 service@maritronics.com
UNITED KINGDOM	ENERGY MARINE (INTERNATIONAL) LTD. 12 Clipstone Brook Industrial Estate Cherrycourt Way LEIGHTON BUZZARD, BEDS LU7 4TX	Tel : +44-1525-851234 Fax :+44-1525-852345 info@engmar.com
U.S.A / TEXAS	HONEYWELL HERMETIC 4522 Center Street DEER PARK, TX 77536	Tel : +1-281-930 1777 Fax : +1-281-930 1222 Toll free call in the USA: 1-800-900 1778 hermetic@honeywell.com

5. Description

5.1 General

The **HERMetic Samplers** are designed for sampling of liquids or chemicals, which present a Fire-, Health- or Air pollution Hazard.
The equipment is designed and certified for use in potentially explosive atmospheres area.

5.2 Sampling types

Several kinds of samples can be realised with this sampler. To get different samples, 4 bottles are available: Zone bottle, Spot bottle, Running bottle and Bottom bottle.

The Zone bottle allows sampling of the upper level inside the tank.

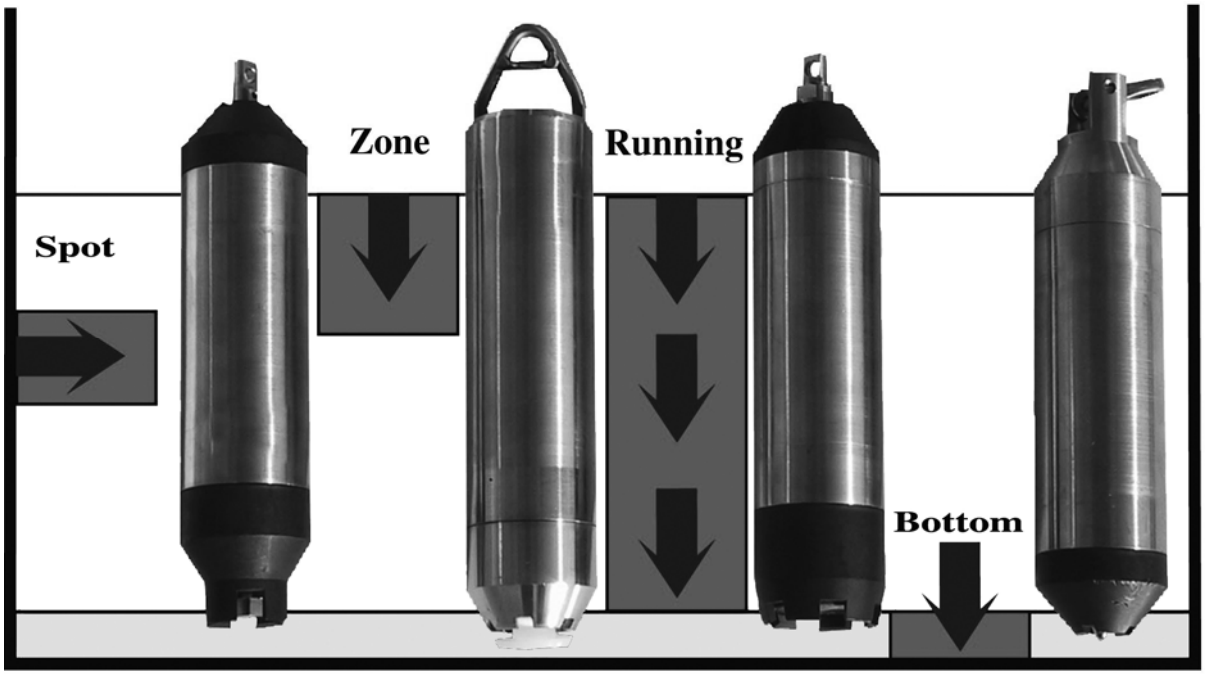
The Spot bottle allows sampling at a determinate height.

The running bottle allows sampling all along the displacement of the bottle inside the tank.

The Bottom bottle allows sampling of the tank bottom.

As far as the kinds of sampling are concerned, please refer to ISO 3170 “Petroleum liquids – Manual sampling”.

Different kinds of samplings



All these bottle are interchangeable, please refer to § 6.1.
For specific application, other bottles exist. For further information, please contact.

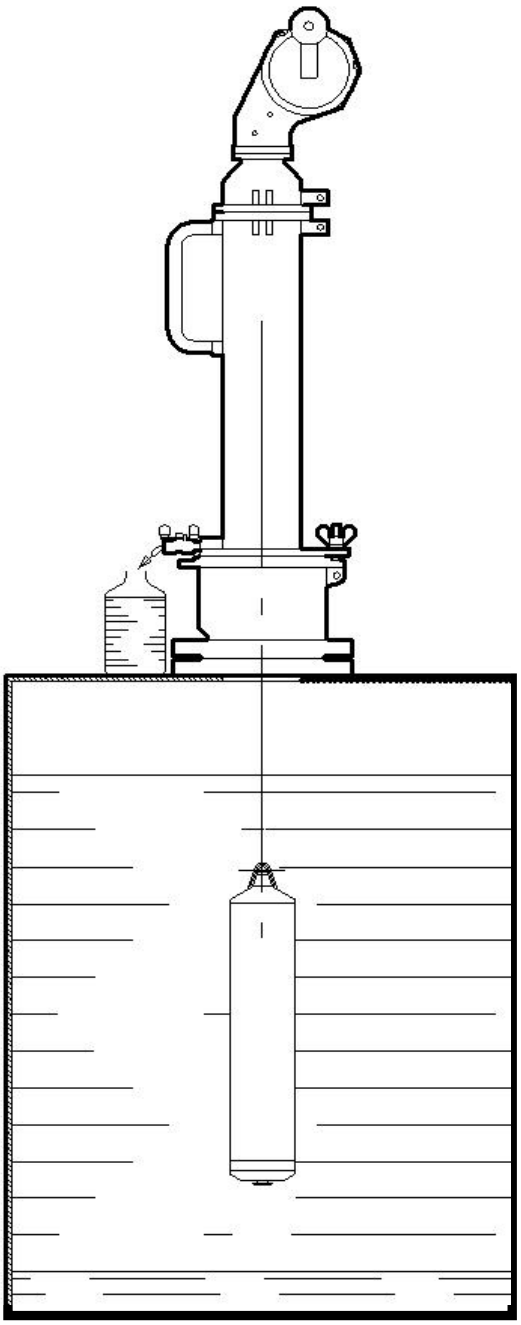
The sampler is delivered as standard with zone sampling bottle. All other sampling bottles are available as option.

5.3 Sampling principle

5.3.1 Connection and grounding system

All HERMetic products are easy to connect. This HERmetic sampler is connected by 3 wing screws to top of the valve.

If the instrument is connected to genuine HERMetic valve, grounding is effected through the connection on the valve. No additional grounding strap is necessary. For further information, please refer to §2 “Recommendation for safe use”.



5.3.2 Sampling method

The sample is taken by a vertical move of the bottle inside the fluid.

The bottle is linked with a graduated tape. A reading window allows monitoring the bottle location.

For complete explanation of sampling procedures, please refer to §6 “Operation”.

Important note: to avoid contamination of the sample taken by the sampler itself, check and clean the unit and the bottle prior to use. Clean the unit with an appropriate cleaner without impacting the unit or contamination risk of the next sample.

5.3.3 Liquid transfer

After sampling, the liquid can be transferred into a laboratory bottle through a transfer valve.

The transfer of the liquid from the sampling bottle to a laboratory bottle occurs by gravity.

The opening of the bottle valve is realized by lowering the sampling bottle until its sitting on the ball of the valve.

6. Operation

6.1 Checking before use

Before using the sampler:

- Check the good state of the device.
- Check the cleanliness of the unit (sampler and bottle) to prevent any contamination of the sample.
- Inspect the bottle tape end for breaks, kinks and wear. If there is some damage, replace the tape before use.
- Check of the attachment of the hook locking device on the tape.
- Check the closure of the hook locking device according to Fig. 1. The swivel hook has to be locked in use.

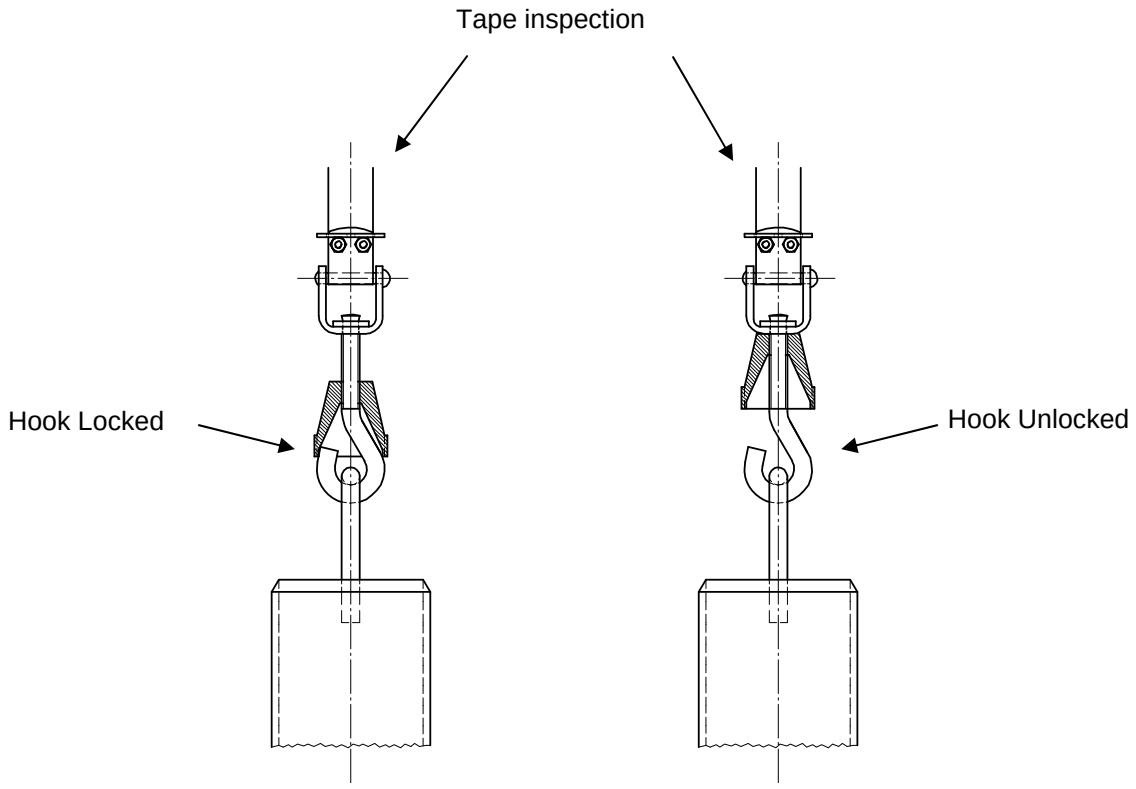


Fig. 1

Nota: Clean the instrument of any excess of liquid after use. Open and rotate the carter winder and clean the storage tube. This cleaning must be done very properly, in particular when corrosive liquids are gauged, such as strong acids or caustic soda for instance.

Store the instrument in a dry location.

6.2 Operation with ZONE SAMPLING BOTTLE

	ND	TS	DESCRIPTION
	30617	21091	Zone bottle 1,8 liter

1. Install the sampler with the sampling bottle on top of the 4” valve.
2. Prepare the connection between the transfer valve at the bottom of sampler and the laboratory bottle. Check that the laboratory bottle content is at least 2 l.
3. Open the 4” ball valve.
4. Lower the bottle at a speed of at least 0,5 m/sec. If the lowering speed is too low the liquid will not flow through the bottle as the ball resistance to flowing has to be higher than its weight in order to keep open the bottom of the container.
5. When the appropriate depth has been reached lift the bottle back into the sampler housing. Turn the crank until getting a catch that keeps the tape fully tight.
6. Close the 4” ball valve.
7. Open the transfer valve at the bottom of the sampler.
8. Lower the sampling bottle until it is sitting on the valve ball. This opens the valve of the sampling bottle. The liquid will flow from the sampling bottle through the transfer valve into the laboratory bottle.
9. When sampling is completed (or in case of partial transfer of liquid), close transfer valve, lift sampling bottle, open 4” ball valve no more than 30° to drain residual liquid back in the tank.
10. Close the 4” ball valve.
11. Remove the sampler from the ball valve.
12. If required clean the sampling device prior to the next sampling. The top part of the sampler housing and winder can be removed as well and the sampling bottle dismounted from the tape. If the tape requires cleaning it can be unwound, preferably on another reel.

6.3 Operation with BOTTOM SAMPLING BOTTLE

	ND	TS	DESCRIPTION
O	30516	21056	Bottom bottle 0.50 l FFKM assy

1. Install sampler with sampling bottle on top of 4” valve.
2. Prepare connection between transfer valve at bottom of sampler and laboratory bottle. Check that laboratory bottle content is at least 0.5 L.
3. Open 4” ball valve.
4. Lower bottom bottle to reach tank bottom.
5. When bottle bottom valve hits tank bottom bottle fills up automatically.
6. Lift bottle back into sampler housing; turn the crank until getting a catch that keeps the tape fully tight.
7. Close 4” ball valve.
8. Open transfer valve at bottom of sampler.
9. Lower sampling bottle until it is sitting on valve ball. This releases bottle stem and open bottom valve of sampling bottle. Liquid will flow from sampling bottle through transfer valve into laboratory bottle.
10. When sampling is completed (or in case of partial transfer of liquid), close transfer valve, lift sampling bottle, open 4” ball valve no more than 30° to drain residual liquid back in the tank.
11. Close 4” ball valve.
12. Remove sampler from ball valve.
13. If required clean sampling device prior to next sampling. Top part of sampler housing and winder can be removed as well and sampling bottle detached from tape. If tape requires cleaning it can be unwound, preferably on another reel.

6.4 Operation with SPOT SAMPLING BOTTLE

	ND	TS	DESCRIPTION
O	30510	21070	Spot bottle 1.8 l. FFKM assy

1. Install sampler with sampling bottle on top of 4” valve.
2. Prepare connection between transfer valve at bottom of sampler and laboratory bottle. Check that laboratory bottle content is at least 2 L.
3. Open 4” ball valve.
4. Lower spot bottle to level where sample is to be taken.
5. Stop bottle at this level and shake it rapidly up and down about 10 times on a 200 mm stroke.
   This movement has a pumping effect as bottom and upper valves open and close.
6. Lift bottle back into sampler housing; turn the crank until getting a catch that keeps the tape fully tight.
7. Close 4” ball valve.
8. Open transfer valve at bottom of sampler.
9. Lower sampling bottle until it is sitting on valve ball. This releases bottle rod and open bottom valve of sampling bottle. Liquid will flow from sampling bottle through transfer valve into laboratory bottle.
10. When sampling is completed (or in case of partial transfer of liquid), close transfer valve, lift sampling bottle, open 4” ball valve no more than 30° to drain residual liquid back in the tank.
11. Close 4” ball valve.
12. Remove sampler from ball valve.
13. If required clean sampling device prior to next sampling. Top part of sampler housing and winder can be removed as well and sampling bottle detached from tape. If tape requires cleaning it can be unwound, preferably on another reel.

6.5 Operation with RUNNING SAMPLING BOTTLE

	ND	TS	DESCRIPTION
O	30505	21064	Running bottle 1.8 L FFKM assy

0. Adjust calibration cap on top of bottle according to liquid to be sampled.
   Note: adjustment is right when the transferred quantity of liquid falls between 70 and 85% of the capacity of the sampling bottle, i.e. between 1.3l and 1.5l (API MPMS Chapter 8.1, § 8.3.3.3).

1. Install sampler with sampling bottle on top of 4” valve.

2. Prepare connection between transfer valve at bottom of sampler and laboratory bottle. Check that laboratory bottle content is at least 2 L.

3. Open 4” ball valve.

4. Lower running bottle regularly to appropriate depth but do not hit tank bottom to keep bottom plug closed all the time.

5. When appropriate depth has been reached lift running bottle back into sampler housing at same regular speed. Turn the crank until getting a catch that keeps the tape fully tight.

6. Close 4” ball valve.

7. Open transfer valve at bottom of sampler.

8. Lower sampling bottle until it is sitting on valve ball. This releases bottle stem and open bottom plug of sampling bottle. Liquid will flow from sampling bottle through transfer valve into laboratory bottle.

9. When sampling bottle is empty, close transfer valve, lift sampling bottle.

10. Check that the transferred liquid falls between the two marks 1.3l and 1.5l in order to comply with API MPMS Chapter 8.1 requirements.

11. Open 4” ball valve no more than 30° to drain residual liquid back in the tank.

12. Close 4” ball valve.

13. Remove sampler from ball valve.

14. If required clean sampling device prior to next sampling. Top part of sampler housing and winder can be removed as well and sampling bottle detached from tape. If tape requires cleaning it can be unwound, preferably on another reel.

7. Care & Maintenance

7.1 Safety warning

As this equipment has been certified as non-electrical equipment for potentially explosive atmospheres. Specific precautions have to be taken regarding maintenance of the device. The user can exchange parts and modules if following points are observed:

1. Never carry out any repair or trouble shooting in a hazardous area.

2. Substitution of components may impact safety. Use only original spare parts.

3. Work shall be done only by maintenance personnel who has experience with equipment certified for use in potentially explosive atmosphere.

The design of the equipment is modular, i.e. in case of damage, check which modules or spare parts have to be replaced. Order new parts according to enclosed drawings and specific item number TS -----. The instrument consists of the following modules:

- Mechanical parts
- Tape assembly
- Tape cleaner

7.2 Care

Clean the instrument of any excess liquid after use. Open and rotate the carter winder and clean the storage tube. This cleaning must be done very properly, in particular when corrosive liquids are sampled, such as strong acids or caustic soda for instance.

Store the instrument in a dry location.

Check periodically whether the general state of the device is still OK.

Check periodically whether all sealings are still OK.

Check the tape wiper for wear.

Clean periodically the sampling bottle. Check the valves of sampling bottles for liquid leakage.

Check periodically tape from kinks.

Check periodically the carter coating, no metal should be visible.

Check periodically the bearings state. Bearings have limited lifespan.

Check periodically (at least every 6 months) the continuity of grounding by measuring the electrical resistance between the hook lock (or the sampling bottle) and the quick connect coupler. Resistance should not exceed 100 Ω.

7.3 Sampler cleaning

To clean HERMetic Sampler, carter winder can be easily opened as well and sampling bottle detached from tape.

It is required to fit the cleanliness level with the sample goals. Where appropriate, dismantle the winder holder and clean the parts with an appropriate cleaner to prevent any contamination of the sample by the sampler itself.

7.4 Tape cleaning

If tape requires cleaning it has to be unwound. Clean it during its winding-up operation on the winder.

7.5 Tape wiper replacement

- Unscrew the 4 screws of the winder tightening it to the sampler.
- Remove the washer wiper holder.
- Change the wiper.
- Put back the washer wiper holder and tighten the 4 screws again.

7.6 Tape replacement

- Open carter winder from sampler;
- Unwind totally the old tape;
- Remove it and unscrew the screw tightening to the core;
- Put the new tape;
- Fasten the tape to the core with the screw;
- Wind the new tape;
- Close the carter winder with the 2 wing screws.

7.7 Bearings

Bearings are involved in the electrical safety of this device. In case of exchange, use only original spare parts.

7.8 Coated aluminium parts

PA 11: Rilsan = grey color.
The coating should be subject to regular and careful inspection. The continued used of the apparatus should not be permitted if inspection reveals that the protective material has become damaged to the extend that the underlying protected metal is visible, until such damage has been satisfactorily repaired.

8. Specifications

General Specifications

Tape length	up to 30 m/100 ft
Tape graduation	Metric/English
Tape resolution	1 mm / 1/16”
Tape accuracy	±6.3mm/30 m (±1/4”/100 ft approx.)
Liquid density	up to 8kg/dm³
Ambient temperature range	-20°C to 80 °C (-4°F to 176°F)
Mechanical coupling	4”
Weight	7.4 kg approx.
Dimensions	Ø220 x 769 mm approx.

Meets ISO 3170 “Petroleum liquids – Manual sampling”

Tape cleaning device	Non adjustable tape cleaner
Available bottles	Zone, bottom, spot, running sampling bottles
Maintenance	modular design / easy exchange of parts

Specifications subject to change without notice.

9. Drawings

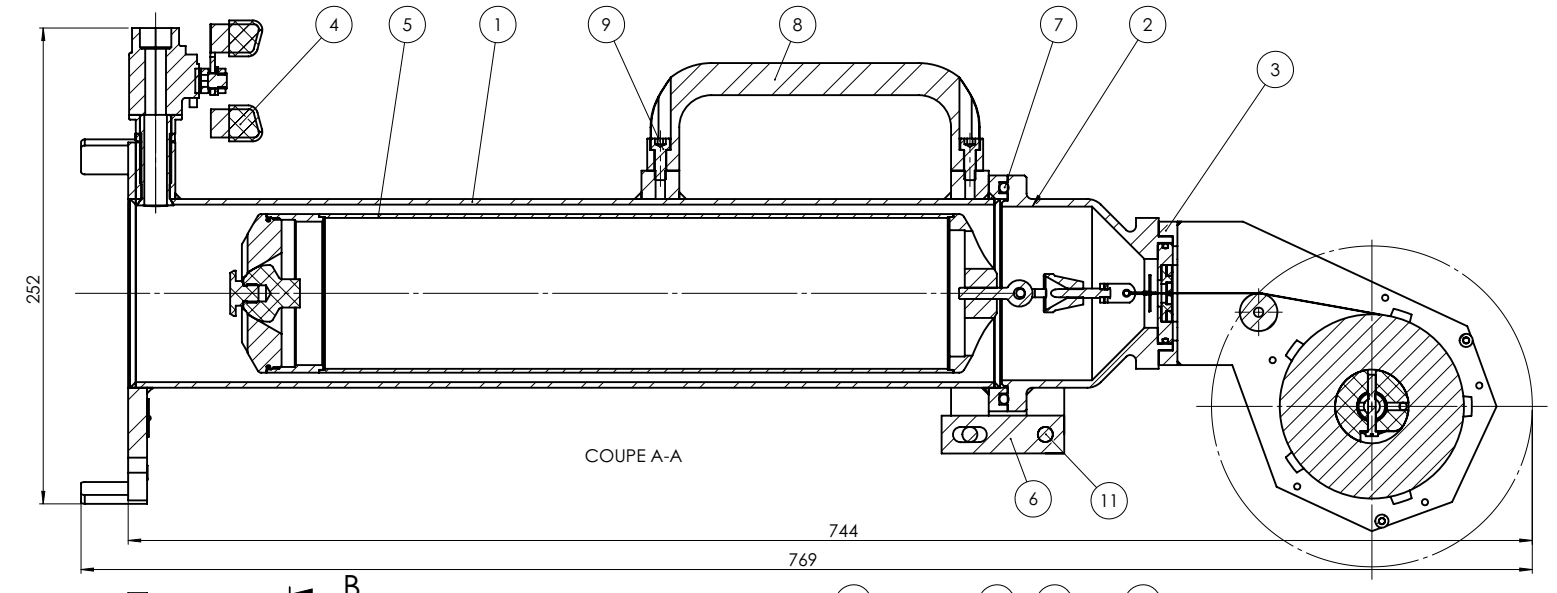
These documents are enclosed in following pages.

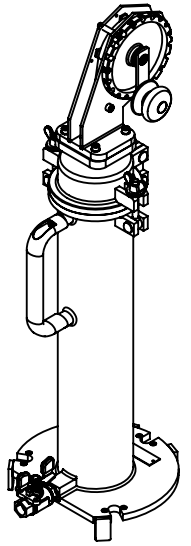
O = Option, according to specific order.

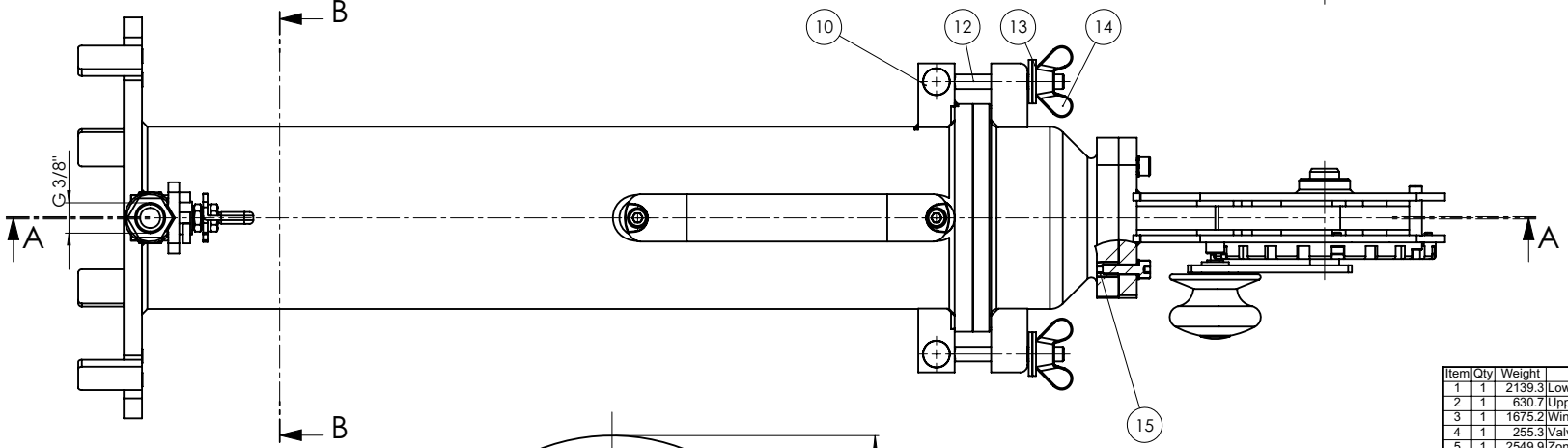
	ND	TS	DESCRIPTION
	20333	10043	Sampler A-4 assy 30 m
	20332	21094	Winder assembly 30 m
	40520	10368	Tape assy w/o winder 30m
	30617	21091	Zone bottle 1,8 liter
O	30505	21064	Running bottle 1.8 L FFKM assy
O	30516	21056	Bottom bottle 0.50 l FFKM assy
O	30510	21070	Spot bottle 1,8 liter
	20252	10053	Deck valve A-4” SS

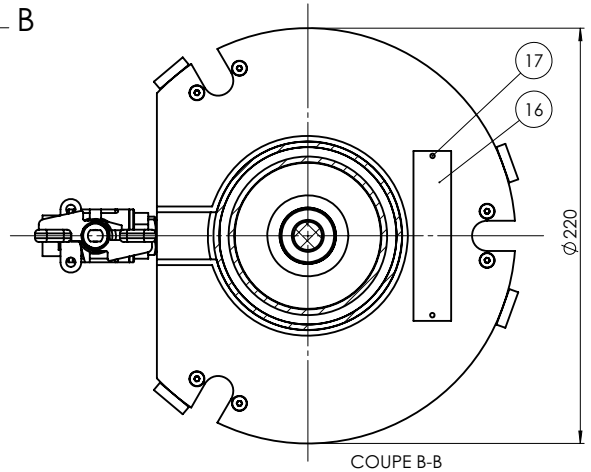
ATEX Certified Product

No modifications permitted without the approval of the "authorised person"









Item	Qty	Weight	Description	Material	TS	ND
1	1	2139.3	Lower part		21079	20325
2	1	630.7	Upper part		21082	20326
3	1	1675.2	Winder assembly 30 m.		21094	20332
4	1	255.3	Valve G3/8" female		20178	41321
5	1	2549.9	Zone bottle 1,8 l.		21091	30617
6	1	71.6	Hinge plate	AISI 316	21040	40988
7	1	6.9	O-Ring ø 107 x 5	FKM	12609	
8	1	197.3	Handle	ALMg3	21058	
9	2	6.0	Socket head cap screw M6x16	A2	40307	DIN 912
10	8	0.6	Starlock ø8	A2	40911	
11	4	13.8	Rod	1.4301	41005	41362
12	2	35.0	Eye bolt M8x70 Type B	A2	40764	DIN 444
13	4	9.0	Flat washer M8	A2	40118	DIN9021
14	2	7.0	Wing nut M8	A2	40015	BN644
15	4	3.5	Threaded Insert M6 a Type 302	A2	40455	TS40455
16	1	14.4	Identification plate TS 10033/43 & TS 10167 S4.nnnn	1.4301	50091	41318
17	2	0.1	Round head grooved pin 1.4x4	A2	40760	DIN1476

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Weight: 7634.7 Eff.

1:2

ISSUE 1 : 19.08.2009

MPSA YYYN

Drawn: CPI 19.08.2009

Control:

Replacement for: ND

Replaced by: ND

Sampler 4"

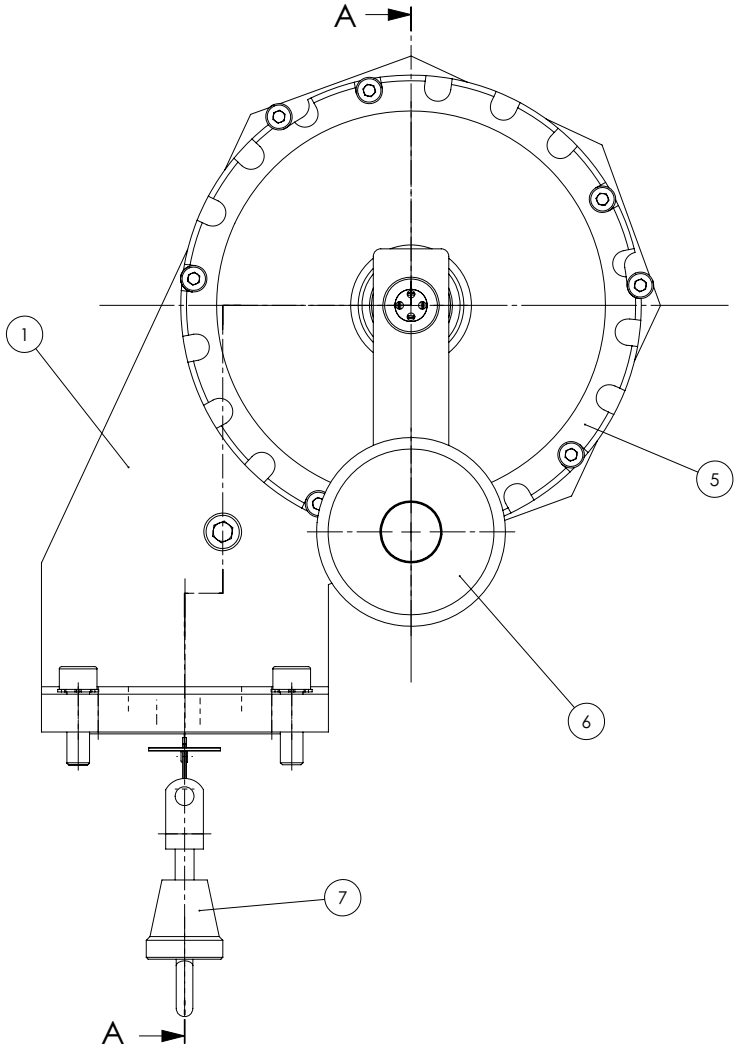
Sampler A4 assy
30 m

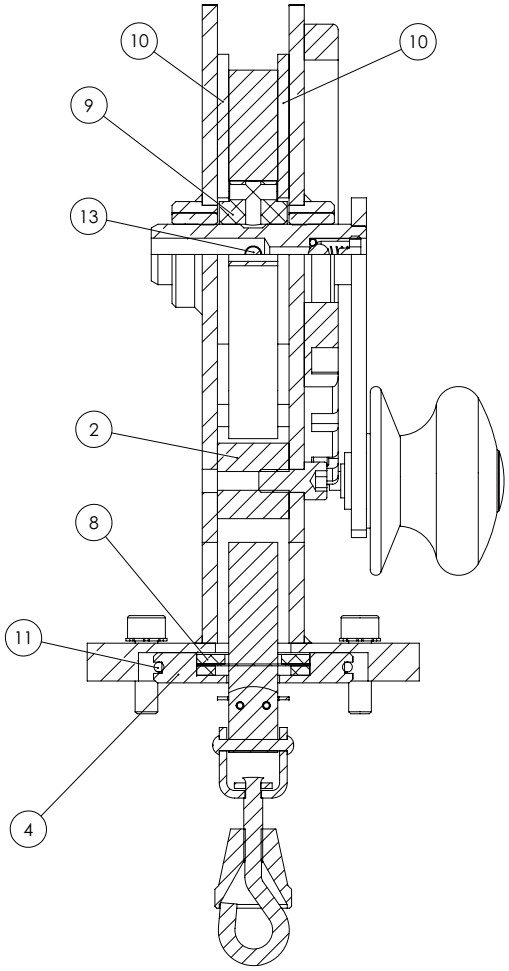
TS 10043

ND 20333

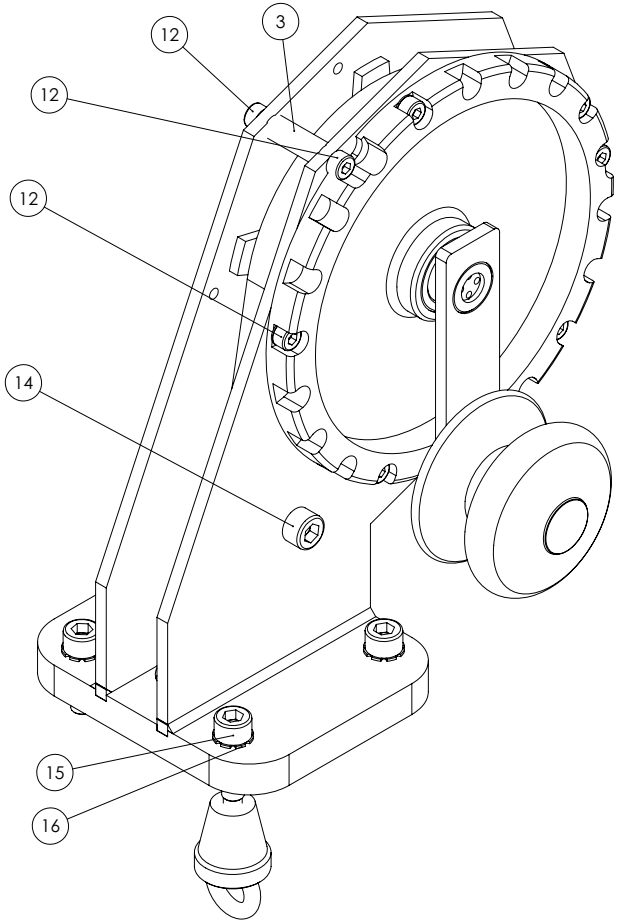
REF ND

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
Tel. +41 26 91 91 500 - Fax +41 26 91 91 505





COUPE A-A



Item	Qty	Weight	Description	Material	TS	ND
1	1	521.7	Winder		21087	30862
2	1	44.8	Pad for tape	1.4301	21083	41090
3	2	4.7	Spacer	1.4301	21084	41091
4	1	94.0	Washer wiper holder	1.4301	21088	41092
5	1	23.8	Washer		20606	30540
6	1	214.7	Crank assy FKM		10313	30544
7	1	688.7	Tape assy w/o winder 30m		10368	40520
8	1	3.2	Tape wiper assy		10506	30153
9	1	27.1	Tape holder	PTFE 25% car	21041	40989
10	2	19.9	Washer	PTFE 25% car	20607	41014
11	1	0.8	O-Ring ø 47.29 x 2.62	FKM	21093	
12	9	5.0	Socket head cap screw M4 x 8	A2	40301	DIN912
13	1	3.0	Slotted cheese head mach. screw M4x30	A2	40800	ISO1207
14	1	2.0	Socket head screw M6 x 12	A2	40312	DIN912
15	4	6.0	Socket head screw M6 x 20	A2	40323	DIN912
16	4	1.0	Toothed lock washer M6	A2	40116	DIN6797

TOLERANCES UNLESS OTHERWISE SPECIFIED									
Norm.Size	Over		6	30	100	300	1000	2000	Angles
Fit	To	6	30	100	300	1000	2000		
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5		0,1°

REMOVE ALL BURRS AND SHARP EDGES

Drawn: CPI 13.01.2009 | Control:

Weight: 1675.2 Eff.

1:1

ISSUE 1 : 13.1.2009

MPSA YYYN

Replacement for: ND | Replaced by: ND

Sampler 4"

Winder assembly 30 m.

TS 21094

ND 20332

REF ND 20333

ATEX Certified Product

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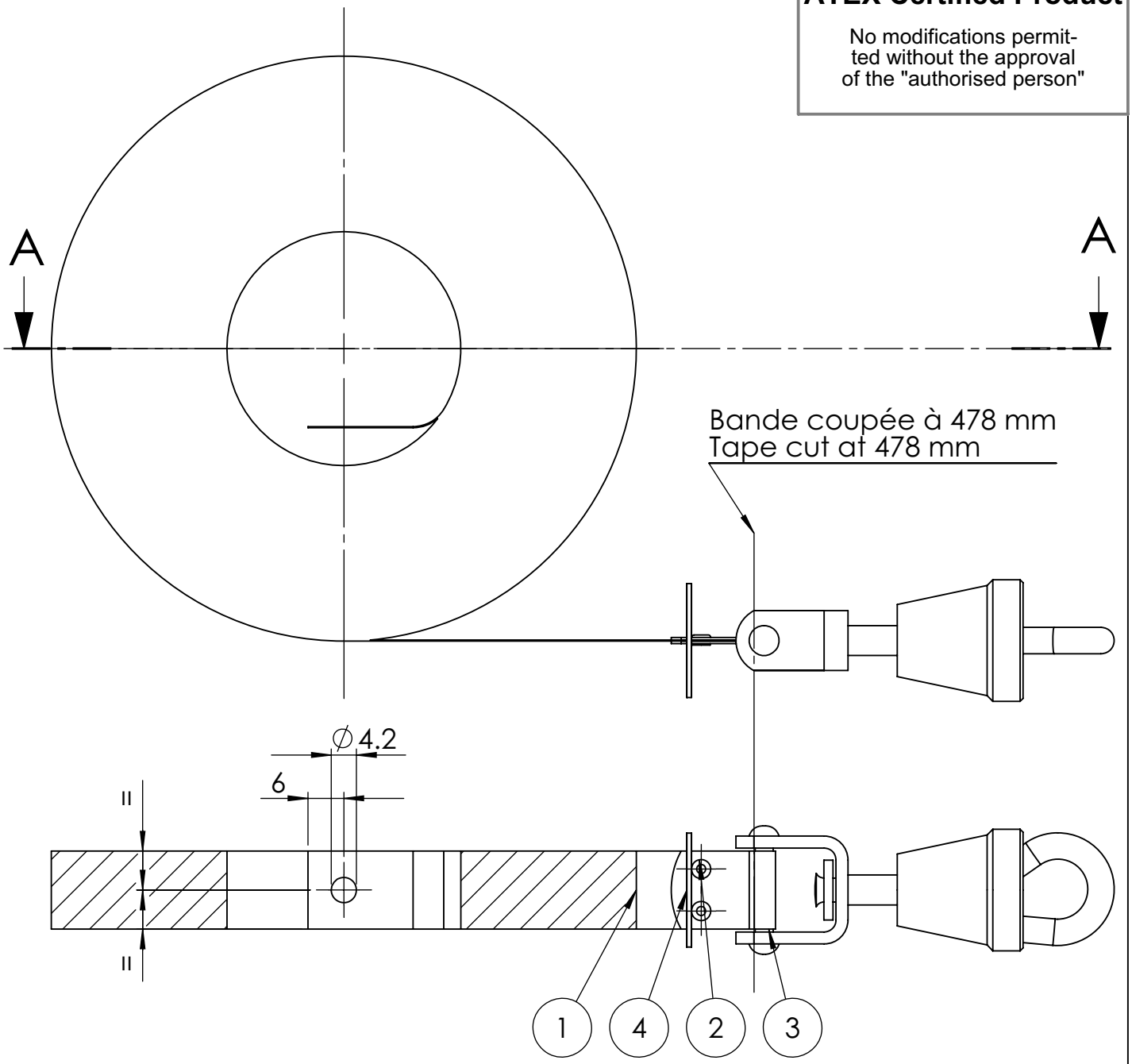


Item	Qty	Weight	Description	Material	TS	ND
1	1	643.3	Tape 30 m Metric/inch	1.4021	19503	
2	2	0.0	Rivet ø 2 x 2.1	A2	-	41367
3	1	42.1	Swivel hook with clasp		20502	40793
4	1	1.7	Washer for tape connector	1.4301	11238	41200

TOLERANCES UNLESS OTHERWISE SPECIFIED									
Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Drawn: CPI 24.06.2008

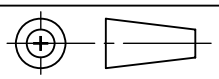
Control:

Weight: 687.2 Eff.

1:1

ISSUE 1 : 23.06.2008

MPSA 1000



Replacement for: ND

Replaced by: ND

Sampler 2" GT

Tape assy w/o winder 30m

TS 10368

ND 40520

REF ND 20280/20281

Enraf Tanksystem SA
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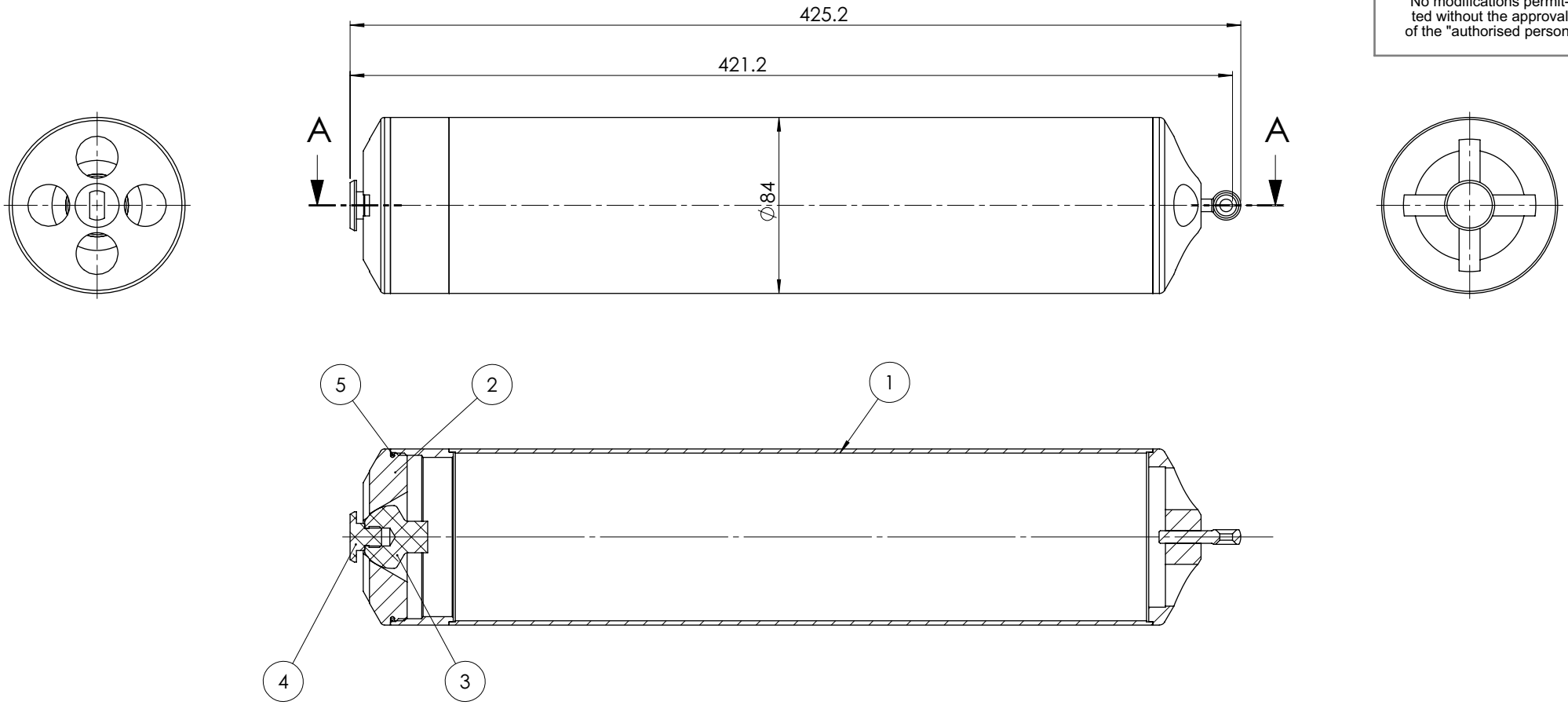

Item	Qty	Weight	Description	Material	TS	ND
1	1	1909.9	Box 1,8 l.	1.4401	21089	30615
2	1	610.5	Bottom cover	1.4401	21090	30616
3	1	24.7	Bottom valve	PTFE	20050	41062
4	1	4.2	Valve screw	PVDF	20051	40593
5	1	0.6	O-Ring ø 75.92x1.78	FKM	21092	

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Weight: 2549.9 Eff.

1:2

ISSUE 1 : 15.09.2008

MPSA YYYN

Drawn: CPI 15.09.2008

Control:

Replacement for: ND

Replaced by: ND

Sampler 4"

Zone bottle 1,8 l.

TS 21091

ND 30617

REF ND 20333/20335

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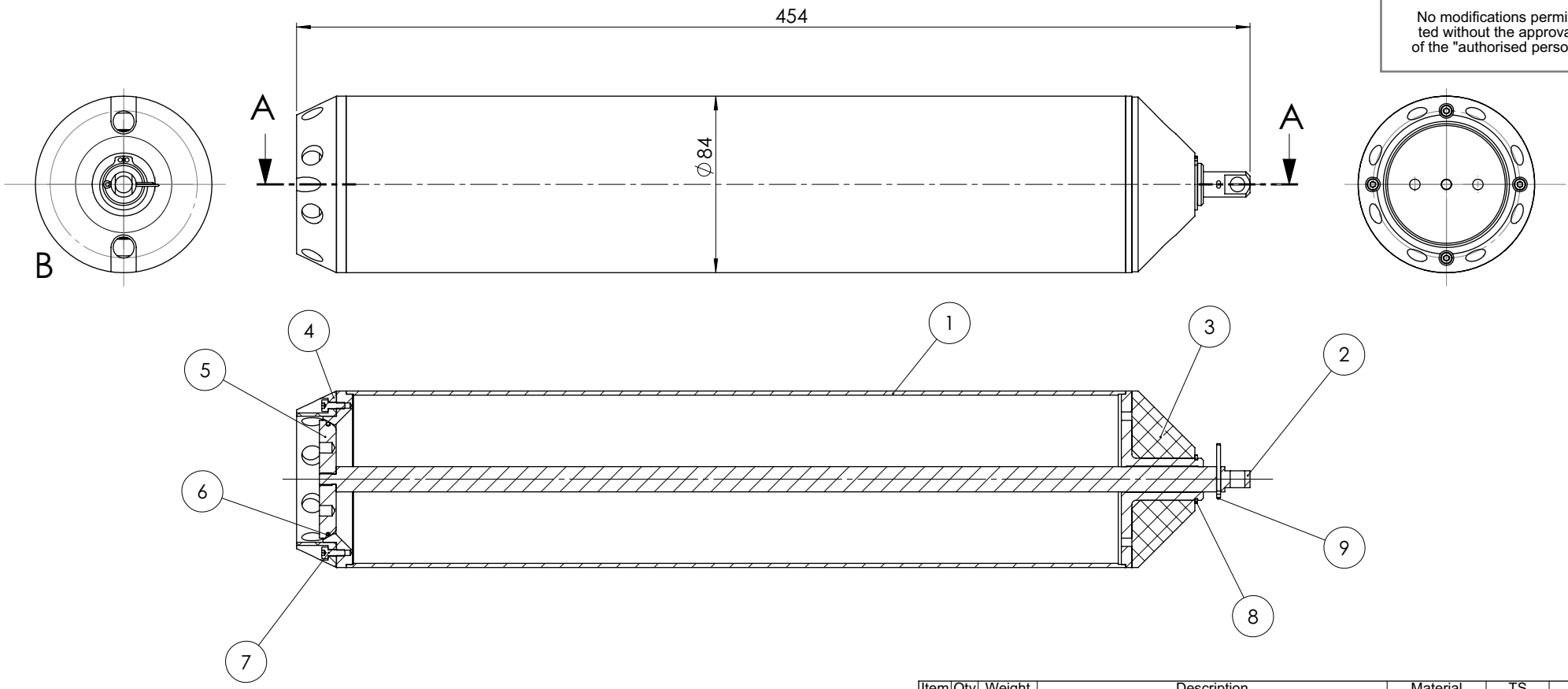
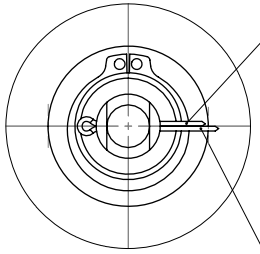


Item	Qty	Weight	Description	Material	TS	ND
1	1	1948.8	Box 1,8 l.	1.4401	21069	30498
2	1	389.7	Stem	1.4401	21067	40979
3	1	160.7	Cap	PTFE 25% car	21068	40980
4	1	52.7	Protection bottle 1,8 l.	PTFE 25% car	21065	40945
5	1	139.8	Bottom plug	1.4401	21066	40978
6	1	0.4	O-Ring ø50,52 x 1.78	FFPM	14094	
7	4	1.0	Socket head cap screw M3 x 8	A2	40300	DIN912
8	1	1.0	Retaining ring 20 x 1,2	1.41110	40901	DIN471
9	1	1.0	Cotter pin 2 x 20	A2	40213	DIN94



DÉTAIL B
ECHELLE 1 : 1

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Weight: 2692.9 Eff.

1:2

ISSUE 1 : 15.09.2008

MPSA
YYYN

Drawn: CPI 15.09.2008

Control:

Replacement for: ND

Replaced by: ND

Sampler 4" GT SS

Running bottle 1,8 l. assy

TS 21064

ND 30505

REF ND 20262/20333/20335

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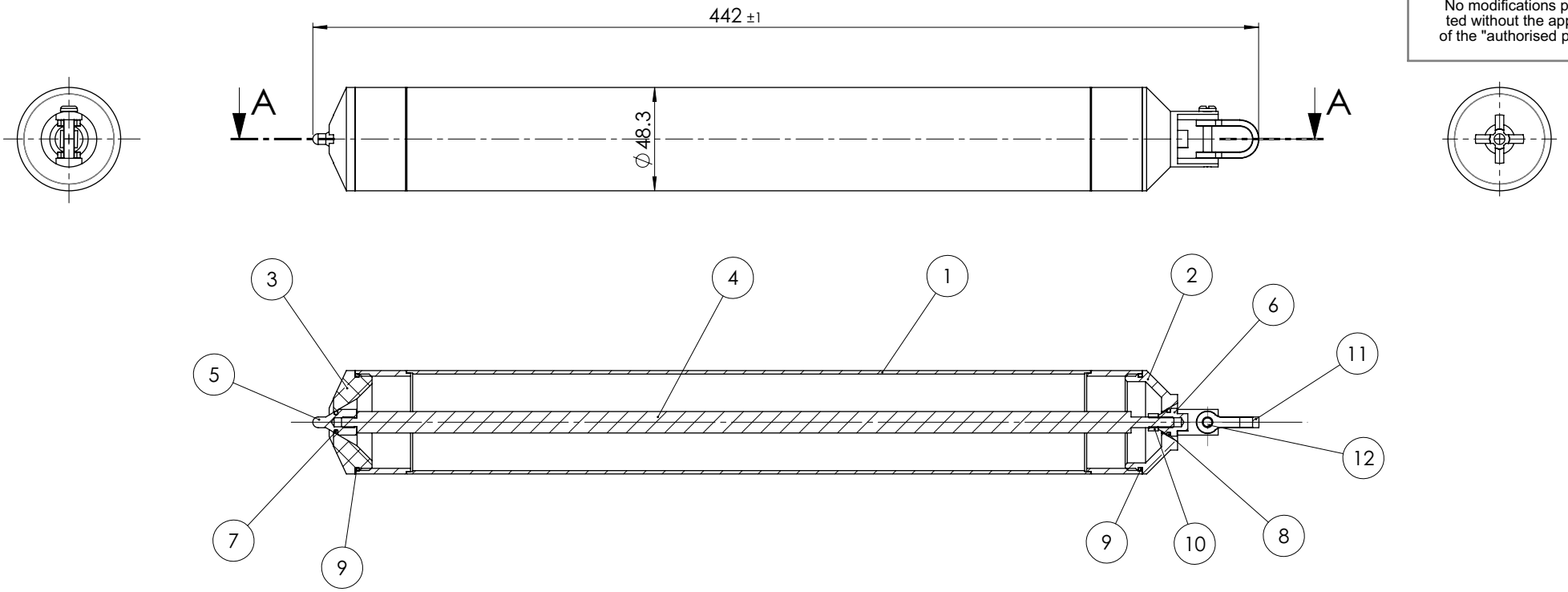

Item	Qty	Weight	Description	Material	TS	ND
1	1	743.6	Tube	1.4401	21052	30518
2	1	112.5	Cover	1.4401	21051	30517
3	1	40.2	Seat	PTFE 25% car	21054	30520
4	1	231.6	Rod	1.4401	21053	30519
5	1	9.4	Bottom valve	1.4401	21055	40983
6	1	7.5	Upper valve	1.4401	20130	40961
7	1	0.1	O-Ring ø6.75x1.78	FFKM	12057	
8	1	0.1	O-Ring ø9.25x1.78	FFKM	20527	
9	2	0.3	O-Ring ø37,82 x 1,78	FFKM	20529	
10	1	2.0	Hex nut M5	A2	40005	ISO4032
11	1	8.5	Clip	1.4301	20129	40965
12	1	3.0	Slotted pan head mach. screw M4x25	A2	40703	ISO1580

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

Weight: 1154.8 Eff.

ISSUE 1 : 16.09.2008

REMOVE ALL BURRS AND SHARP EDGES

1:2

MPSA
YYYN

Drawn: CPI 16.09.2008

Control:

Replacement for: ND

Replaced by: ND

Sampler 4" GT SS

Bomb bottle 0,5 l. assy

TS 21056

ND 30516

REF ND 20262/20333/20335

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
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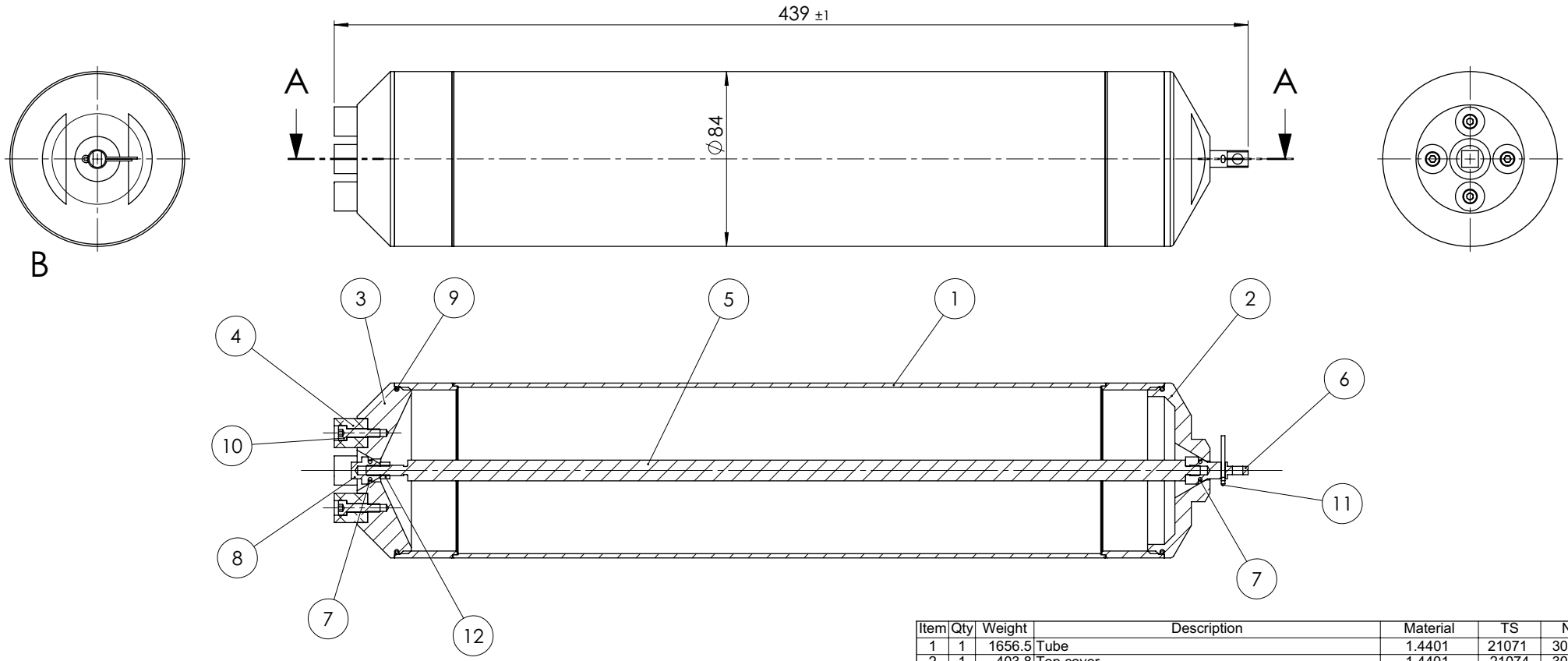
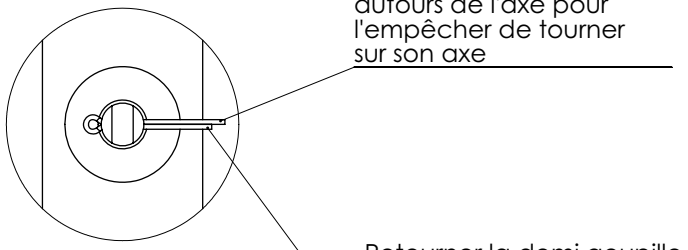


Item	Qty	Weight	Description	Material	TS	ND
1	1	1656.5	Tube	1.4401	21071	30511
2	1	403.8	Top cover	1.4401	21074	30515
3	1	638.1	Bottom cover	1.4401	21072	30513
4	4	4.4	Bottle protection	PTFE 25% car	21073	40981
5	1	239.0	Rod	1.4401	21075	40982
6	1	13.2	Spot upper valve	1.4401	20136	40976
7	2	0.1	O-Ring ø6.75x1.78	FFKM	12057	
8	1	7.5	Upper valve	1.4401	20130	40961
9	2	0.6	O-Ring ø75,92 x 1,78	FFKM	21076	
10	4	2.0	Socket head cap screw M4 x 16	A2	40304	DIN912
11	1	1.0	Cotter pin 2 x 20	A2	40213	DIN94
12	1	2.0	Hex nut M5	A2	40005	ISO4032



DÉTAIL B
ECHELLE 1 : 1

TOLERANCES UNLESS OTHERWISE SPECIFIED									
Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

Weight: 2978.8 Eff.

ISSUE 1 : 16.09.2008

REMOVE ALL BURRS AND SHARP EDGES

1:2

MPSA
YYYN

Drawn: CPI 16.09.2008

Control:

Replacement for: ND

Replaced by: ND

Sampler 4" GT SS

Spot bottle 1,8 l. assy

TS 21070

ND 30510

REF ND 20262/20333/20335

ATEX Certified Product

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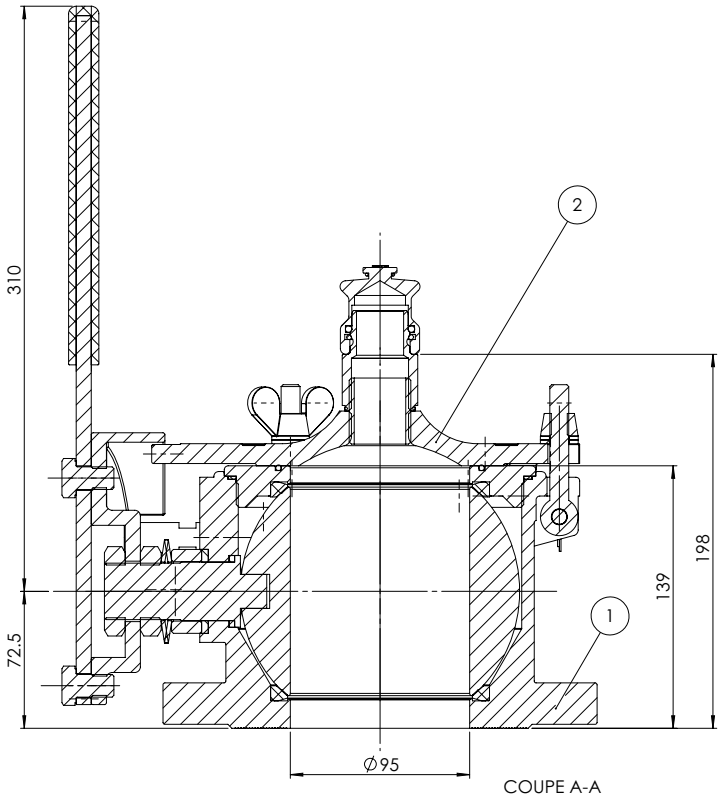
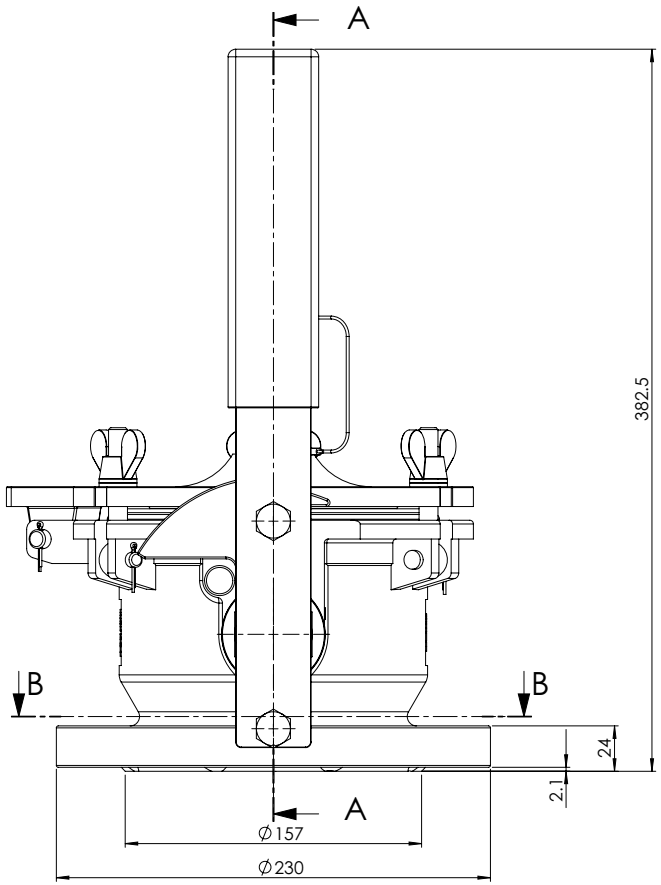
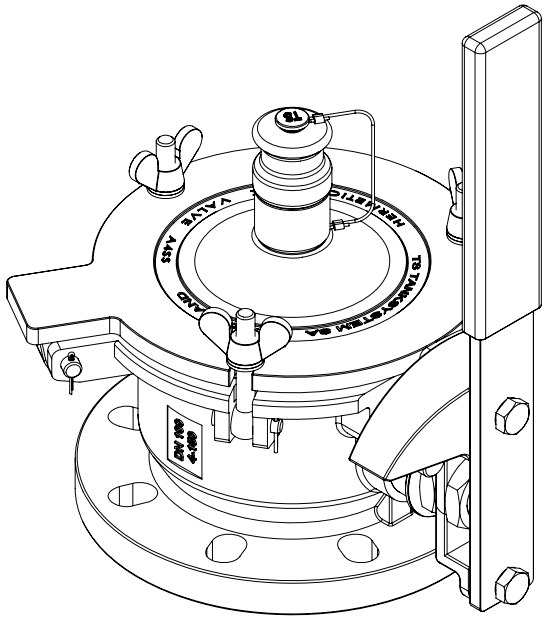
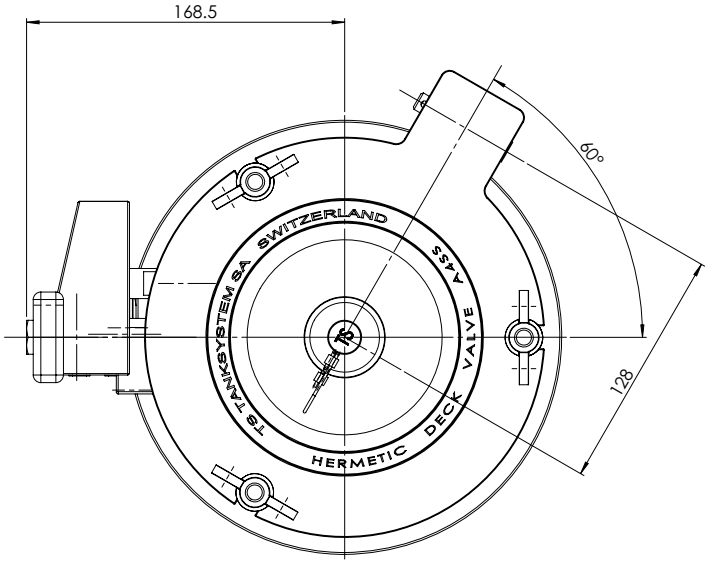
Tel. +41 26 91 91 500 - Fax +41 26 91 91 505

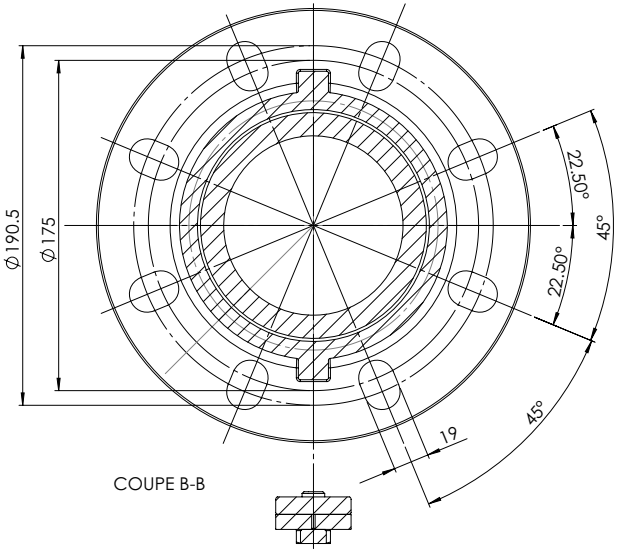


COUPE A-A









COUPE B-B

Fit flange
ANSI 150 lbs 4" (100mm.)
JIS 10K 100 mm.
DIN PN 16 DN 100

Item	Qty	Weight	Description	Material	TS	ND
1	1	19889.0	Valve 4" without cover		10420	20365
2	1	3657.0	Cover 4" assembly		10419	41212

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0.05	0.1	0.15	0.2	0.3	0.5	0.1°

REMOVE ALL BURRS AND SHARP EDGES

Weight: 23546.0 Eff.

1:2

ISSUE 2 : 7.1.2009

MPSA YYYN

Drawn: CPI 07.01.2009

Control:

Replacement for: ND

Replaced by: ND

Valves

HERMetic Deck Valve A-4" SS

TS 10053

ND 20252

REF ND

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
Tel. +41 26 91 91 500 - Fax +41 26 91 91 505

Apparatus Identification **HERMetic Sampler Type GT / GT Chem / GTX Chem / GTN Chem / A4 / GT4**

Apparatus Classification Sampling Equipment

Statement of Conformity

Based on sample product test results using appropriate standards (industrial environment), and in accordance with the following EC Directives, we, Enraf Tanksystem SA, hereby declare under our sole responsibility that the above HERMetic Samplers are in conformity with:

EC ATEX Directive 94/9/EC, Equipment and protective systems
intended for use in potentially explosive atmospheres (ATEX).
EC Type Examination Certificate: KEMA 06ATEX0027 II 1 G c IIB T6

Sample Product Testing for ATEX

Tested by Kema Quality B.V., Utrechtseweg 310, P.O. Box 5185, 6812 AR Arnhem, The Netherlands

Standards Used EN13463-1:2001, Non-electrical equipment for potentially explosive atmopheres – Part 1: Basic method and requirements

EN13463-5:2003, Non-electrical equipment for potentially explosive atmopheres – Part 5: Protection by constructional safety

Notified Body Kema Quality B.V., Utrechtseweg 310, P.O. Box 5185, 6812 AR Arnhem, The Netherlands
Notified Body Number 0344
Report ID KEMA 2090419

Quality Assurance notification Baseefa ATEX 1536
Notified Body Baseefa, Rockhead Business Park, Staden Lane, Buxton, Derbyshire, SK17 9RZ. United Kingdom
Notified Body Number 1180

Manufacturer **ENRAF TANKSYSTEM SA,** Rue de l'Industrie 2, 1630 BULLE, Switzerland

Philippe Despagne
General Manager

Created / modified		Approved	Released	Remarks
1	2006/06/01	2006/06/08	2006/06/12	Creation
2	2007/04/02	2007/04/02	2007/04/02	Update of the ATEX references
3	2008/08/28	2008/09/03	2008/09/03	Update of the company logo - Honeywell
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